CIRI KIMIA DAN BIOLOGI TANAH LAHAN BEKAS TAMBANG BATUBARA DI SAWAHLUNTO YANG DIREVEGETASI DENGAN SENGON DAN AKASIA

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Abstrak

Penelitian ini bertujuan untuk mengetahui ciri kimia dan biologi tanah lahan bekas tambang batu bara serta melihat keberadaan bakteri pemfiksasi N di rhizosfer 2 tanaman revegetasi utama (Akasia dan Sengon) dengan perbedaan umur rhizosfer tanaman revegetasi bekas lahan tambang batubara di Sawahlunto. Penelitian ini menggunakan metode survey (*purposive sampling*). Data yang diperoleh dari pengamatan analisis kimia tanah disusun dalam bentuk tabel data berdasarkan kriteria kimia tanah. Sedangkan hasil populasi bakteri Fiksasi N diolah secara statistik dengan uji F pada taraf nyata 5%. Jika berbeda nyata (F hitung lebih besar dari F tabel), maka dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DNMRT) pada taraf 5%. Berdasarkan hasil penelitian didapatkan, ciri kimia dan biologi tanah lahan bekas tambang batubara yang direvegetasi dengan Sengon dan Akasia terlihat bahwa perbedaan nilai kimia Sengon dan Akasia dari masing-masing umur tanaman, selanjutnya terlihat adanya peningkatan total populasi seiring meningkatnya umur revegetasi tetapi pengaruhnya tidak signifikan hasil analisis total populasi fiksasi N. Bakteri tanah pada umur 11 tahun dengan jumlah 6,6 x 10^5 cfu/g tanah dan lahan terbuka dengan jumlah 1,3 x 10^5 cfu/g tanah. Dari hubungan beberapa umur revegetasi Sengon dan Akasia dengan total populasi bakteri dan aktivitas mikroorganisme tanah serta beberapa sifat kimia tanah memperlihatkan hubungan yang lemah hingga erat.

Kata kunci : Bakteri N, Fiksasi, Reklamasi, Revegetasi, Sengon dan Akasia,Tambang Batubara

CHEMICAL AND BIOLOGICAL FEATURES OF SOIL FREE OF COAL MINE IN SAWAHLUNTO REVEGETED WITH SENGON AND AKASIA

Abstract

This study aims to determine the chemical and biological characteristics of the ex-coal mining land and to see the presence of N-fixing bacteria in the rhizosphere of 2 main revegetation plants (Acacia and Sengon) with differences in the age of the rhizosphere of revegetation plants of ex-coal mining land in Sawahlunto. This study used a survey method (purposive sampling). The data obtained from the observation of soil chemical analysis are arranged in the form of a data table based on soil chemical criteria. Meanwhile, the results of the N fixation bacterial population were statistically processed with the F test at the 5% real level. If it is significantly different (F count is greater than F table), then proceed with Duncan's New Multiple Range Test (DNMRT) at the 5% level. Based on the results of the study, the chemical and biological characteristics of the ex-coal mine land which were revegetated with Sengon and Acacia showed that the chemical values of Sengon and Acacia were different from each plant age, then there was an increase in the total population with increasing age of revegetation but the effect was not significant. analysis of the total population of N fixation. Soil bacteria at the age of 11 years with a total of 6.6 x 105 cfu / g of soil and open land with a total of 1.3 x 105 cfu / g of soil. From the relationship between several revegetation ages of Sengon and Acacia with the total bacterial population and activity of soil microorganisms as well as several soil chemical properties, it shows a weak to close relationship.

Keywords: N Bacteria, Fixation, Reclamation, Revegetation, Sengon and Acacia, Coal Mining